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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eog-kyu Kim

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EXAMINER

ELAHEE, MD S

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/769,768	Applicant(s) KIM, EOG-KYU	
	Examiner MD S. ELAHEE	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is responsive to an amendment filed on 04/22/2008. Claims 1-16 are pending.

Response to Arguments

2. Applicant's arguments filed on 04/22/2008 remarks have been fully considered but they are not persuasive because of the following:

Regarding claims 1, 6, 15, the applicant argues on pages 11-12 that AAPA fails to teach or suggest that the main terminal maintains the loop voltage generated when the external terminal is in connection with the telephone network. It is because AAPA's specification teaches that the loop voltage of the main terminal (i.e. first loop voltage) and the loop voltage of the external terminal (i.e. second loop voltage) of AAPA are not the same, but instead, in fact, are different (paragraph [0004]). Examiner respectfully disagrees with this argument. The applicant did not claim that the main terminal maintains the **constant** loop voltage generated when the external terminal is in connection with the telephone network.

Therefore, the rejections of the claims in view of AAPA and Ludeman will remain.

Drawings

3. The drawing of fig.9 is objected to under 37 CFR 1.83(a) because it fails to show a legend describing the labels on the Figure as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 4-6, 8 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Ludeman (U.S. Patent No. 6,434,232).

Regarding claim 1, with respect to Figure 1, Applicant admitted prior art teaches a method of operating a main terminal which is connected to a telephone network to communicate with the telephone network and selectively connects an external terminal to the telephone network, the method comprising:

generating an internal current from a loop voltage generated when the external terminal is in connection with the telephone network, if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches applying the generated internal current to the main terminal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches disconnecting the telephone network from the external terminal and instead connecting the telephone network to the main terminal, wherein while the internal current is flowing in the main terminal, the main terminal maintains the loop voltage generated when the external terminal is in connection with the telephone network (page 1, paragraphs 0003, 0004);

However, Applicant admitted prior art does not specifically teach obtaining an internal current from a loop voltage generated. Ludeman teaches obtaining an internal current from a loop voltage generated (col.2, lines 27-33). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art to incorporate the feature of obtaining an internal current from a loop voltage generated in Applicant admitted prior art's invention as taught by Ludeman. The motivation for the modification is to do so in order to measure a loop current from a loop voltage.

Regarding claim 4, Applicant admitted prior art, as applied to claim 1, teaches the internal current obtaining operation comprises:

determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, if it is determined that the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches reading out the loop voltage if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches obtaining the internal current from the read-out loop voltage and proceeding to the internal current applying operation (page 1, paragraphs 0003, 0004).

Regarding claim 5, Applicant admitted prior art, as applied to claim 1, teaches the internal current obtaining operation comprises:

determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal if it is determined that the external terminal is in use, otherwise returning to the operation of determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches reading out the loop voltage if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, otherwise returning to the operation of determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches obtaining the internal current from the read-out loop voltage (page 1, paragraphs 0003, 0004).

Claim 6 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Applicant admitted prior art teaches a signal checking unit which checks if a switching request signal requesting that the telephone network be disconnected from the external terminal and instead be connected to the main terminal is generated, and outputs the result of the checking as a first control signal (page 1, paragraphs 0003, 0004).

Regarding claim 8, Applicant admitted prior art, as applied to claim 8, teaches the internal current production unit comprises:

a second terminal checker which checks use or non-use of the external terminal and outputs the result of the checking as a third control signal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches a second voltage detector which reads out the loop voltage in response to the first control signal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches a second current controller which obtains the internal current from the read-out loop voltage and applies the internal current to the main terminal, wherein the signal checking unit checks the generation or non-generation of the switching request signal in response to the third control signal (page 1, paragraphs 0003, 0004).

Regarding claim 10, Applicant admitted prior art in view of Ludeman, as applied to claim 6, does not specifically teach that the main terminal is a personal computer or a facsimile. Examiner takes official notice that the main terminal can be a personal computer or a facsimile is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to modify Applicant admitted prior art in view of Ludeman to incorporate the main terminal as a personal computer or a facsimile in Applicant admitted prior art's invention in view of Ludeman's invention in order to connect a personal computer or a facsimile to a telephone network.

Regarding claim 11, Applicant admitted prior art in view of Ludeman, as applied to claim 6, does not specifically teach that the external terminal is a telephone or an automatic answering machine. Examiner takes official notice that the external terminal can be a telephone or an automatic answering machine is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art in view of Ludeman to incorporate the external terminal as a telephone or an automatic answering machine in Applicant admitted prior art's invention in view of Ludeman's invention in order to connect a telephone or an automatic answering machine to a telephone network.

Regarding claim 12, Applicant admitted prior art, as applied to claim 6, teaches a controller which checks if the loop voltage generated when the external terminal is in connection with the telephone network is maintained when the internal current flows in the main terminal, and generates the selection signal in response to the result of the checking (page 1, paragraphs 0003, 0004).

Regarding claim 13, Applicant admitted prior art, as applied to claim 6, teaches that the internal current production unit generates the selection signal when the internal current is applied to the main terminal (page 1, paragraphs 0003, 0004).

Regarding claim 14, Applicant admitted prior art, as applied to claim 6, teaches the switch request signal inherently comprises an agreed Dual Tone Multi-Frequency code (page 1, paragraphs 0003, 0004).

7. Claims 2, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Ludeman further in view of Kunisch (U.S. Patent No. 6,757,378).

Regarding claim 2, Applicant admitted prior art, as applied to claim 1, teaches the internal current obtaining operation comprises:

determining whether the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches reading out the loop voltage if it is determined that the external terminal is in use (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches reading out the loop voltage [i.e., stored loop voltage], obtaining the internal current from the loop voltage, and proceeding to the internal current applying operation, if it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal (page 1, paragraphs 0003, 0004).

However, Applicant admitted prior art in view of Ludeman does not specifically teach storing the read-out loop voltage. Kunisch teaches storing the read-out loop voltage (col.4, lines 59-64). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art in view of Ludeman to incorporate the feature of storing the read-out loop voltage in Applicant admitted prior art's invention in view of Ludeman's invention as taught by Kunisch. The motivation for the modification is to do so in order to store voltage such that the voltage can be used to measure a threshold value.

Regarding claim 3, Applicant admitted prior art, as applied to claim 2, teaches that the internal current obtaining operation further comprises: determining whether the use of the external terminal has been concluded, after the loop voltage storing operation, wherein if it is determined that the use of the external terminal has not been concluded, the method proceeds to the operation of determining whether it is requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, and if it is not requested that the telephone network be disconnected from the external terminal and instead be connected to the main terminal, the method proceeds to the external terminal use conclusion/non-conclusion determining operation (page 1, paragraphs 0003, 0004).

Claim 7 is rejected for the same reasons as discussed above with respect to claim 2. Furthermore, Applicant admitted prior art, as applied to claim 6, teaches the internal current production unit comprises:

a first terminal checker which checks use or non-use of the external terminal and outputs the result of the checking as a second control signal (page 1, paragraphs 0003, 0004);

Applicant admitted prior art further teaches a first voltage detector which reads out the loop voltage in response to the second control signal (page 1, paragraphs 0003, 0004); and

Applicant admitted prior art further teaches a first current controller which reads out the loop voltage stored in the storage unit in response to the first and second control signals and applies the internal current obtained from the loop voltage to the main terminal, wherein the signal checking unit checks the generation or non-generation of the switching request signal in response to the second control signal (page 1, paragraphs 0003, 0004).

8. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Ludeman (U.S. Patent No. 6,665,398).

Claim 15 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Applicant admitted prior art does not specifically teach a controller controlling the loop voltage constant according to the internal signal. Ludeman teaches a controller controlling the loop voltage constant according to the internal signal (col.5, lines 13-24). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Applicant admitted prior art to incorporate the feature of a controller controlling the loop voltage constant according to the internal signal in Applicant admitted prior art's invention as taught by

Ludeman. The motivation for the modification is to do so in order to keep voltage constant such that the loop current can be reduced to a value below a threshold value.

Claim 16 is rejected for the same reasons as discussed above with respect to claim 15. Furthermore, Applicant admitted prior art, as applied to claim 15, teaches that the main terminal comprises a first DC supply unit, the external terminal comprises a second DC supply unit generating the loop voltage, and the controller controls the first DC supply unit to generate the loop voltage when the telephone network is switched from the external terminal to the mail terminal (page 1, paragraphs 0003, 0004).

Allowable Subject Matter

9. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims after overcoming 112, second paragraph rejection.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MD S. ELAHEE whose telephone number is (571)272-7536. The examiner can normally be reached on Mon to Fri from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner
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